

What we claim is:

1. A process for producing cumene which comprises the step of contacting benzene and propylene under at least partial liquid phase alkylating conditions with a particulate molecular sieve alkylation catalyst, wherein the particles of said alkylation catalyst have a surface to volume ratio of about 80 to less than 200 inch^{-1} .

2. The process of claim 1 wherein the particles of said alkylation catalyst have a surface to volume ratio of about 100 to about 150 inch^{-1} .

3. The process of claim 1 wherein the molecular sieve of the alkylation catalyst is selected from MCM-22, PSH-3, SSZ-25, MCM-36, MCM-49, MCM-56, faujasite, mordenite and zeolite beta.

4. The process of claim 1 wherein said alkylating conditions include a temperature of about 10°C to about 125°C , a pressure of about 1 to about 30 atmospheres, and a benzene weight hourly space velocity (WHSV) of about 5 hr^{-1} to about 50 hr^{-1} .

5. A process for producing cumene which comprises the steps of:

i) contacting benzene and propylene with a particulate molecular sieve alkylation catalyst under at least partial liquid phase alkylating conditions to provide a product containing cumene and a polyisopropylbenzene fraction;

ii) separating the polyisopropylbenzene fraction from the product; and

iii) contacting the polyisopropylbenzene fraction and benzene with a particulate molecular sieve transalkylation catalyst under at least partial liquid phase transalkylating conditions,

wherein the particles of at least said alkylation catalyst have a surface to volume ratio of about 80 to less than 200 inch^{-1} .

6. The process of claim 5 wherein the particles of said alkylation catalyst have a surface to volume ratio of about 100 to about 150 inch^{-1} .

7. The process of claim 5 wherein the molecular sieve of the alkylation catalyst is selected from MCM-22, PSH-3, SSZ-25, MCM-36, MCM-49, MCM-56, faujasite, mordenite and zeolite beta.

8. The process of claim 5 wherein said alkylating conditions include a temperature of about 10°C to about 125°C, a pressure of about 1 to about 30 atmospheres, and a benzene weight hourly space velocity (WHSV) of about 5 hr^{-1} to about 50 hr^{-1} .

9. The process of claim 5 wherein the particles of said transalkylation catalyst have a surface to volume ratio of about 80 to less than 200 inch^{-1} .

10. The process of claim 5 wherein the molecular sieve of the transalkylation catalyst is selected from MCM-22, PSH-3, SSZ-25, MCM-36, MCM-49, MCM-56, ZSM-5, faujasite, mordenite and zeolite beta.

11. The process of claim 5 wherein said said transalkylating conditions include a temperature of about 100°C to about 200°C; a pressure of 20 to 30 barg, a weight hourly space velocity of 1 to 10 on total feed and benzene/polyisopropylbenzene weight ratio 1:1 to 6:1.